

Title (en)

EARTHMOVING MACHINE COMPRISING WEIGHTED STATE ESTIMATOR

Title (de)

ERDBEWEGUNGSMASCHINE MIT GEWICHTETEM ZUSTANDSBERECHNER

Title (fr)

MACHINE DE TERRASSEMENT COMPRENANT UN DISPOSITIF D'ESTIMATION D'ÉTAT PONDÉRÉ

Publication

EP 3183394 A1 20170628 (EN)

Application

EP 15834183 A 20150813

Priority

- US 201414463106 A 20140819
- US 2015044989 W 20150813

Abstract (en)

[origin: US922237B1] Earthmoving machines are provided comprising a translational chassis movement indicator, an earthmoving implement inclinometer, and an implement state estimator. The translational chassis movement indicator provides a measurement indicative of movement of the machine chassis in one or more translational degrees of freedom. The implement inclinometer comprises (i) an implement accelerometer, which provides a measurement indicative of acceleration of the earthmoving implement in one or more translational or rotational degrees of freedom and (ii) an implement angular rate sensor, which provides a measurement of a rate at which the earthmoving implement is rotating in one or more degrees of rotational freedom. The implement state estimator generates an implement state estimate that is based at least partially on (i) implement position signals from an implement angular rate sensor and an implement accelerometer, (ii) signals from the translational chassis movement indicator and the implement inclinometer, and (iii) one or more weighting factors representative of noise in the signals from the translational chassis movement indicator and the implement inclinometer.

IPC 8 full level

E02F 3/76 (2006.01); **E02F 3/43** (2006.01); **E02F 9/20** (2006.01)

CPC (source: EP US)

E02F 3/845 (2013.01 - EP US); **E02F 9/265** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 922237 B1 20151229; AU 2015305864 A1 20170309; AU 2015305864 A2 20170309; AU 2015305864 B2 20171012; AU 2015305864 B9 20180322; CA 2957933 A1 20160225; CA 2957933 C 20191231; EP 3183394 A1 20170628; EP 3183394 A4 20180328; JP 2017532466 A 20171102; JP 6271080 B2 20180131; WO 2016028587 A1 20160225

DOCDB simple family (application)

US 201414463106 A 20140819; AU 2015305864 A 20150813; CA 2957933 A 20150813; EP 15834183 A 20150813; JP 2017507383 A 20150813; US 2015044989 W 20150813